Claims

What is claimed is:

1. A method for optimizing a selection of risk controls based upon maximizing the economic value added within a client's given risk control budget, wherein said method comprises the following steps:

identifying and measuring risks;

creating at least one risk control system based upon said risks;

determining the economic value added of each risk control system; and

selecting an optimal risk control system that has a maximum economic value added based upon the determining step.

2. The method according to claim 1, wherein the step of identifying and measuring risks further includes the steps of

creating and storing lists of parameterized risks; and

preparing a client risk profile, said client risk profile including said lists of parameterized risk that are applicable to said client.

3. The method according to claim 2, wherein said lists of parameterized risks are classified and arranged by at least industry type, organizational structure, organizational objective, and functional segments within each industry type.

4. The method according to claim 2, wherein the step of identifying and measuring risks further includes the steps of

inputting client characteristics and applying scaling factors to said client risk profile; and

measuring said risks based upon each risk's exposure.

5. The method according to claim 3, wherein the step of identifying

and measuring risks further includes the steps of

inputting client characteristics and applying scaling factors to said client risk profile; and

measuring said risks based upon each risk's exposure.

6. The method according to claim 4, wherein said risk exposures are estimated from an analysis of loss distribution functions of each risk.

7. The method according to claim 5, wherein said risk exposures are estimated from an analysis of loss distribution functions of each risk.

8. The method according to claim 4, wherein the step of identifying and measuring risks further includes the steps of

creating and storing parameterized models of the risk exposure of said risks, wherein said parameterized models are scaleable based upon various exposure units; and

creating and storing a client composite risk model based upon said parameterized models of the risk exposure of said risks, wherein said client composite risk model incorporates all of said risks affecting said client.

9. The method according to claim 7, wherein the step of identifying and measuring risks further includes the steps of

creating and storing parameterized models of the risk exposure of said risks, wherein said parameterized models are scaleable based upon various exposure units; and

creating and storing a client composite risk model based upon said parameterized models of the risk exposure of said risks, wherein said client composite risk model incorporates all of said risks affecting said client.

10. The method according to claim 9, wherein the client composite risk model is based upon client specific characteristics of at least industry type, organizational structure, organizational objectives and functional segment within each industry type.

11. The method according to claim 10, further including the step of calculating a total risk exposure, E_T, for said client composite risk model.

12. The method according to claim 1, wherein the step of creating at least one risk control system further includes the steps of

creating and storing sets of parameterized management risk control models for said risks;

creating and storing sets of parameterized specific risk control models for said risks; and

combining said sets of parameterized management risk and specific risk control models into at least one risk control system.

13. The method according to claim 11, wherein the step of creating at least one risk control system further includes the steps of

creating and storing sets of parameterized management risk control models for said risks;

creating and storing sets of parameterized specific risk control models for said risks; and

combining said sets of parameterized management risk and specific risk control models into at least one risk control system.

14. The method according to claim 13, wherein said final risk control system includes sets of parameterized management risk and specific risk control models for each risk model included in said client composite risk model.

15. The method according to claim 12, each parameterized set of management risk controls, M_i, includes parameter values, said parameter values include

a production efficiency value, ρ_i, stated per a pre-defined unit characteristic of the client for the production efficiency value, ρ_i-*unit*;

a direct exposure reduction factor, d_i;

a management efficiency factor, x_i;

a cost factor, c_i, state per a pre-defined unit characteristic of the client for the cost factor, c_i-*unit*; and

a time interval, t_i, required to implement each management risk control, m_i.

16. The method according to claim 12, each parameterized set of specific risk controls, S_j, includes parameter values, said parameter values include

a production efficiency factor, θ_j, stated per a pre-defined unit characteristic of the client for the production efficiency value, θ_j-*unit*;

a percent reduction in exposure, b_j, obtained by each specific risk control, s_j, if said risk control operates correctly over an entire life of each risk control;

a cost factor, ε_j, stated per a pre-defined unit characteristic of the client for the cost factor, ε_j-*unit*; and

a time interval, m_j, required to implement each specific risk control.

17. The method according to claim 14, each parameterized set of management risk controls, M_i, includes parameter values, said parameter values include

a production efficiency value, ρ_i, stated per a pre-defined unit characteristic of the client for the production efficiency value, ρ_i-*unit*;

a direct exposure reduction factor, d_i;

a management efficiency factor, x_i;

a cost factor, c_i, state per a pre-defined unit characteristic of the client for the cost factor, c_i-*unit*; and

a time interval, t_i, required to implement each management risk control, m_i.

18. The method according to claim 14, each parameterized set of specific risk controls, S_j, includes parameter values, said parameter values include

a production efficiency factor, θ_j, stated per a pre-defined unit characteristic of the client for the production efficiency value, θ_j-*unit*;

a percent reduction in exposure, b_j, obtained by each specific risk control, s_j, if said risk control operates correctly over an entire life of each risk control;

a cost factor, ε_j, stated per a pre-defined unit characteristic of the client for the cost factor, ε_j-*unit*; and

a time interval, m_j, required to implement each specific risk control.

19. The method according to claim 18, each parameterized set of specific risk controls, S_j, includes parameter values, said parameter values include

a production efficiency factor, θ_j, stated per a pre-defined unit characteristic of the client for the production efficiency value, θ_j-*unit*;

a percent reduction in exposure, b_j, obtained by each specific risk control, s_j, if said risk control operates correctly over an entire life of each risk control;

a cost factor, ε_j, stated per a pre-defined unit characteristic of the client for the cost factor, ε_j-*unit*; and

a time interval, m_j, required to implement each specific risk control.

20. The method according to claim 19, wherein the step of determining the economic value added of each risk control system, further includes the steps of

calculating the economic value added of each risk control system with an algorithm which incorporates the parameters associated with said sets of management risk and specific risk controls; and

selecting a final risk control system that generates a maximum value of the economic value added.

21. The method according to claim 20, wherein said algorithm is used to generate the economic value added , Δ ^{I}EVA, between an improved (Imp) risk control system and a current (Cur) risk control system, and where CTR is a corporate tax rate, C* is a cost of capital, m indicates a management control, c indicates a specific risk control, and y is years, said algorithm is defined as follows:

$$\Delta\,{}^{I}EVA = [\{\{([\textstyle\sum \rho_i]^I + [\,(\sum d_i)^I \bullet E_T] - [(\sum c_i)^I / y]) \bullet (1 - CTR)\} - [(\sum c_i)^I \bullet C^*\,]\}m +$$

$$\{\{\ ([\,(\textstyle\sum x_i)^I \bullet (\sum \theta_i)^I] + [\,(\sum x_i)^I \bullet (\sum b_j \bullet e_j)^I\,] - [\,(\sum \varepsilon_j{}^I)/y]) \bullet (1 - CTR)\}$$

$$- \ [(\textstyle\sum \varepsilon_j{}^I) \bullet C^*]\}c]_{Imp}$$

$$-$$

$$[\{\{([\textstyle\sum \rho_i]^C + [\,(\sum d_i)^C \bullet E_T] - [(\sum c_i)^C / y]) \bullet (1 - CTR)\} - [(\sum c_i)^C \bullet C^*\,]\}m$$

$$+ \quad \{\{\ ([\,(\textstyle\sum x_i)^C \bullet (\sum \theta_i)^C] + [\,(\sum x_i)^C \bullet (\sum b_j \bullet e_j)^C\,] - [\,(\sum \varepsilon_j{}^C)/y]) \bullet (1 -$$

$$CTR)\} - [(\textstyle\sum \varepsilon_j{}^C) \bullet C^*]\}c]_{Cur}.$$

22. A computer-based data processing system to enable an operator to create a risk control system providing a maximum economic value, wherein said system comprises:

means for storing risk models, wherein said risk models include risks and corresponding risk exposures;

means for storing specific risk control models further classified and arranged by at least industry type, organizational structure, and functional segments within each industry type;

means for storing management risk control models further classified and arranged by at least industry type, organizational structure, and functional segments within each industry type;

means for developing risk control systems by combining said specific risk and management risk controls into at least one client specific risk control system; and

means for determining an optimum risk control system by calculating an Economic Value Added (EVA) of each client specific risk control system so that said operator can select the optimum risk control system that demonstrates a maximum Economic Value Added (EVA).

23. The system according to claim 22, wherein said means for determining an optimum risk control system is a computerized device capable of processing mathematical algorithms.

24. A processor-readable article of manufacture having embodied thereon software comprising a plurality of code segments that implements the method of claim 1, in order to enable an operator to optimize a selection of specific risk controls and management risk controls into a final risk control system designed to maximize the economic value added within a client's given risk control budget.